



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
DESA/HWSB/HWSS
2890, Woodbridge Avenue, Edison, NJ 08837

EXECUTIVE NARRATIVE

Case No. : 43255

Site: STANDARD CHLORINE

Number of Samples: 13 (Soil), 2(Water)

Analysis: BNA

SDG No.: BAQC1

Laboratory: KAP Technologies, Inc

Sampling dates: 01/22/2013- 01/23/2013

QAPP

HWSS #: Not available.

Contractor Document #: Not available.

SUMMARY:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.

Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated.

Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings: None.

Major Findings: None.

Minor Findings: None.

COMMENT: None

Reviewer Name(s): Archana Mirle

Approver's Signature:

Date:

Name:

Affiliation: USEPA/R2/HWSB/HWSS



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Data Qualifier Definitions (National Functional Guidelines)

Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.		
J-	The result is an estimated quantity, but the result may be biased low.		
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		<i>The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".</i>	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	



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DATA ASSESSMENT

ANALYSIS: BNA

The current SOP HW-35/SVOA (Revision 1.1) December 2010, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied. Data has been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi- Automated Screening Results Report. Tentatively Identified Compounds (TICS) for BNA organic fraction is not validated.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:



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No problems were found for this criterion.

B) Field or rinse blank contamination:

The following semi volatile samples have analyte concentrations reported less than 5x the CRQL. The associated rinsate blank concentration is less than 5x the CRQL. Detected compounds are qualified U. Nondetected compounds are not qualified. Sample concentrations are reported at the CRQL.

Bis (2-ethylhexyl) phthalate BAQC1, BAQC2, BAQC3, BAQC4, BAQC5, BAQC6, BAQD1, BAQD3

C) Trip blank contamination for VOA aqueous samples:

Not applicable.

D) Storage Blank associated with VOA samples only:

Not applicable.

E) Tics "R" rejected:

Tentatively Identified Compounds (TICS) for BNA organic fraction is not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP). If the mass calibration is in error, all associated data will be classified as unusable "R".

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.



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No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 20% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than 30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity. If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

8. COMPOUND IDENTIFICATION:

A) Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

10. FIELD DOCUMENTATION:



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No problems were identified.

11. OTHER PROBLEMS:

None.

12. DILUTIONS, RE-EXTRACTIONS and REANALYSIS:

Samples may be reanalyzed after dilution, re-extraction and for other QC reasons. In such cases, the best result values are consolidated in one single report and the other report is marked as not to be used. The following reports were identified as not to be used

None.